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ARMOUR RESEARCH FOUNDATION
of
Illinois Institute of Technology
Technology Center
Chicago 16, Illinois

Project No. A 021-5
(Formerly 90-1034A)

DESIGN AND CONSTRUCTION OF INFRARED RECEIVING SET AN/SAQ - 2 (XN)

Contract NObsr 52441

for

Department of the Navy
Bureau of Ships
Washington 25, D. C.

Report No. 14

(Monthly Progress Report
January 1953)

Copy No. 3

20 February 1953

DESIGN AND CONSTRUCTION OF INFRARED RECEIVING SET AN/SAQ - 2 (XN)

I. STATEMENT OF PROBLEM

This is the fourteenth monthly (19th month of work on the project) progress report on the Design and Construction of Infrared Receiving Set AN/SAQ - 2 (XN); the report covers the period 1 January to 30 January 1953. The project is directed toward the construction of a tracker and analyzer capable of automatically following and analyzing the spectral characteristics of a radiation source in the range of 0.35 microns to 2.7 microns. The present project is a continuation of work on equipment developed and delivered to the Bureau of Ships on Contract No. NObsr 42216. The previous work served as the starting point for the present project.

II. DISCUSSION OF RESEARCH

A. Optics

The installation and alignment of the optical components of the tracker and analyzer is 90% complete. Further alignment will be done during systems testing.

B. Electronics

Installation and wiring of the slip rings is expected to be completed February 8, 1953. Testing of the completed equipment will begin when the optics are installed.

A tube complement report is being submitted. Probably this is the final tube complement. A summary of the report follows.

Tube Type	Total Number of Each Type	Number For Tracker	Number For Analyzer	Number For Power Supply
5686	8		8	
5719	2	1	1	
5726	2	2		
5749	2	2		
5751	32	16	16	
5814	3	1	2	
OB2	2			2
5R4WGT	3			3
6AS7G	2			2
6BG6G	8	8		
K-1095-P7	1		1	
Totals 11	65	30	28	7

No data were taken during January.

III. FUTURE WORK

The next month of the project will be devoted to systems testing.

IV. NOTEBOOKS AND PERSONNEL

Contributing personnel during this work period have been:

D. Decker — H. T. Betz

W. W. Hansen — D. A. Pontarelli

The notebooks in which work on this project is recorded are:

C-1792	C-2000	C-2886
C-1804	C-2274	

Respectfully submitted,

ARMOUR RESEARCH FOUNDATION
of Illinois Institute of Technology

H. T. Betz, Supervisor
Light and Optics Section

R. F. Humphreys, Chairman
Physics Research